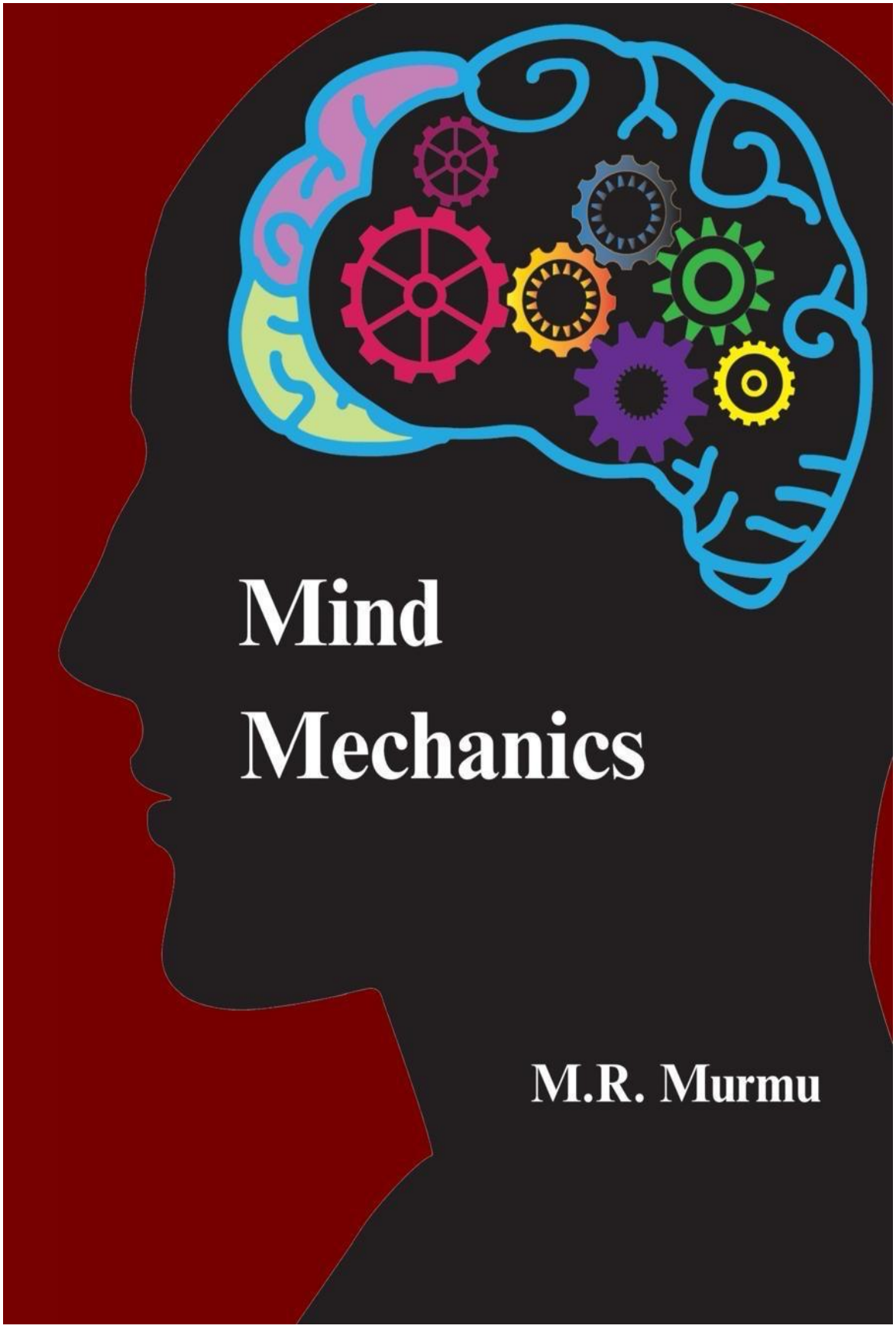
Mind
Mechanics
M.R. Murmu

Mind Mechanics

M.R.Murmu

Preface

This book is for psychology and philosophy lovers. I have tried to study the workings of mind exclusively in this book. Mind in itself is a very complex phenomenon. I am not sure I have completely understood it. I just put the most common everyday experience we all had with our minds. It took me seven years to complete this book, still it appears incomplete to me. Before understanding anything I just wanted to understand the process of understanding itself. This book is intended to stimulate thoughts of the readers who are interested in understanding mind or the universe. They can use this book as a flash of light to explore the unexplored hidden corners of their mind. When I close my eyes I see mind like a mountain with various new irregularities, imperfections and sometimes self organization. The ways are like neural networks carrying information from one region of the brain to another. Each corner is made of inanimate matter but it provides a substratum for the emergence of sentience and all its complexities. I travel through these routes every day. I stop at some places and explore new areas and activities that were waiting to be discovered. And every time I found them , I am amazed.

- Manas Ranjan Murmu

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List of new terms and definitions

Active Consciousness : When there is sense of self with an active mind which can perform various mental operations.

Attention gap: Consciousness is everlasting in there but when we do some action we need to pay attention for the complete accomplishment of the work. But due to the restless nature of mind , the attention is generally not continuous and breaks from time to time causing attention gap.

Beauty: A higher order cognitive process which has a multi-level operational layer . It is the highest development of psychological reward system.

Cognitive code : Cognitive code is a unique and invisible code for each novel experience that are submitted to the consciousness through the senses or direct imaginative construction. These codes are used by the natural memory for different cognitive processes. These codes are everlastingly present in the consciousness by default. Each experience we introduce in our mind has a unique room in the consciousness which is occupied and stored as various kind of memory. These invisible codes are accessible only when it is expressed in visual or auditory format in the consciousness. It's a purely mechanical process and operates automatically.

Desire: A desire is a expression produced by the mind in the active consciousness which may or may not induce the organism to act in a definite way. Desires are generally accompanied by instincts.

Perception: Perception can be defined as the process of interaction of active consciousness with the external environment causing a mental representation.

Psychological activity: Any movement or vibration that occurs at a given time within the consciousness , that results in a subjective experience in an organism with or without its awareness of that process.

Psychological environment: Psychological environment is the present status of the individual in which mind is operating. e.g when one hate something or someone the mind will try to avoid it because it does not want to disturb its psychological environment by interacting with it.

Psycho-geometry: The pattern formed in the mind following the perceptual shape of an object in space .

Sensation: Sensation involves the sensory processes which produces sensation in brain and consciousness through neural activities. e.g hunger, pain , orgasm etc.

Selfness: A sense of independent existence.

Joker Effect: Experiencing one emotion while exhibiting another.

Consciousness

Consciousness is present in the fabric of spacetime and matter . It has different properties. The most well experienced attribute is the property of attention or awareness . Consciousness has dual state . That is

- Active consciousness
- Inactive consciousness

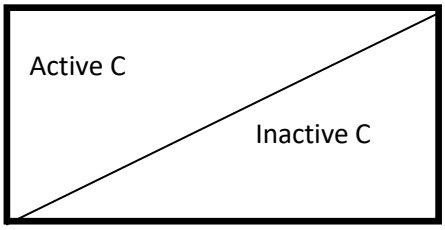

Fig 1: States of Consciousness

The active consciousness is active throughout the lifespan of an organism. The active consciousness allow us to experience the state of different feelings, thoughts , emotion etc. But when an organism dies the consciousness becomes inactive.

The consciousness is present in animate as well as inanimate things. The active consciousness is found in living things only . The active state of consciousness is brought about through a network of active participation and continuous flow of energy in a system. Individual mind (active) is the total experience divided by total time .

$$\mathbf{C_i} = \frac{\in}{\mathbf{T}} \ldots (1)$$

Where, C_i= Individual Consciousness

$\in$ = Total experience

T= Total time

The consciousness is flexible and living . The consciousness is never static and always change itself within itself.

The consciousness is activated by the result of continuity of several active state of conscious fragments(units). Each fragment has two state(Active and inactive) and also the intermediate state of both active and inactive at the same time. The consciousness is present in entire body of the organism . Each cell organelles includingelementary particles have these state of consciousness. For the synthesis of a active form of consciousness we require specific organic matter organized in a way such that each conscious fragment can communicate to

bring about a microcosm. Mind is parallelly evolved according to the biological demand of an organism. The mind which is the product of consciousness can operate only in the realm of consciousness.Intelligence , creativity and learning are tools of mind. These intrinsic abilities of the mind require certain neural activities which function together with the consciousness tooperate as a whole to give us a conscious experience. When an organism dies , these networks are disconnectedand the continuousconscious fragments returns to inactive state and cease to exist . Death (deactivated consciousness) is an irreversible phenomenon.

Consciousness and its products

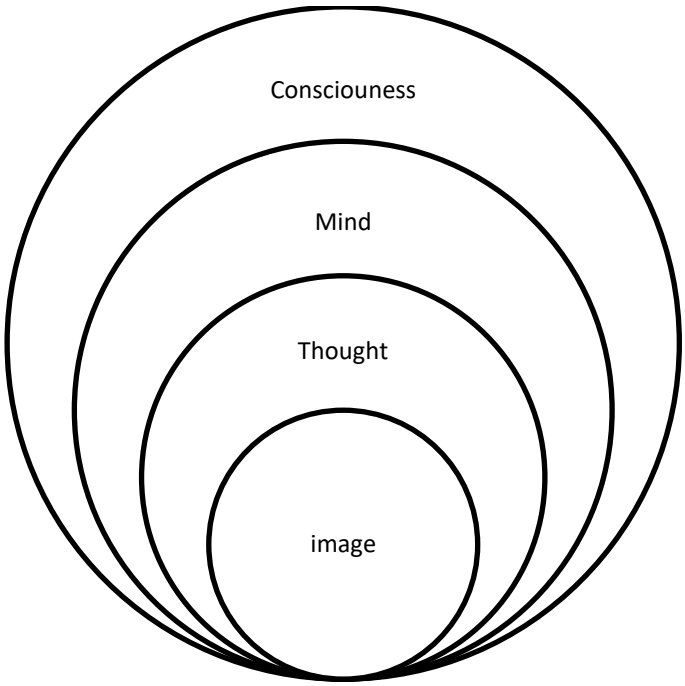

Fig 2 : Field of consciousness

The perception is possible only with attention ,which is most often ignored . The creation is perceived through its senses and to some extent beyond the sense also but the reality of anything can be experienced only through complete attention . The attention is within the realm of consciousness and can never be separated from it. The psychological projection is the simultaneous combination of attention and sensation which creates various impact in the brain. The thoughts and emotions depends on the attention to manifest and therefore can be shaped consciously. The sense organ brings information to the brain and these information are recorded and analyzed by intelligence which produces a response . These process goes on and on with or without our awareness. The nature of attention is transparent and flexible as it can withdraw itself and join to any desired senses. There are many factors thatinfluence the attention of the consciousness.The attention also creates the mind ,which has its own nature, which will be explained later , and sustain its existence along with itself. The mind and

attention lies within oneanother . The actions are born out of the desire and the desire is projected by mind in the form of thought within consciousness.

These thoughts can be observed and can be consciously guided with the complete attentiveness of oneself from immergence of thought to the formation of desire.

Experiencer and the experience

The universe cannot be experienced directly . The information that are received through our senses are cognized by consciousness with the help of brain. The experiencer (consciousness) cannot experience the matter directly although consciousness is present in matter in inactive state. The matter inside and outside the organism are experienced by the experiencer through neuro -electrochemical reactions. These reactions involves the interaction between the consciousness and elementary unknown conscious particles for the experience to occur. There is state within the consciousness where the information is manifested in the form of reality in the realm of consciousness. Anything that can exist demands an experiencer to exist. Indeed, the experiencer is participating in the process of existence and experience. Consciousness is the silent property of matter. Matter can be experienced only by an active or functional consciousness and for the experience to occur certain neural connections are prerequisite. Existence is a constant flow of particles, energy and information in the spacetime. Active consciousness is a later product of these elements . This is why we are unable to know life before the origin of life itself because the knower was inactive. Let assumes the total no of conscious entity (E)in the universe be { $E = E_1 + E_2 + E_3 + \ldots\ldots\ldots + E_n$ }. And each conscious entity consist of series of experiences [Є]

$$[\boldsymbol{\epsilon = \varepsilon_1 + \varepsilon_2 + \cdots \cdot \varepsilon_n}]$$

Total Universal active conscious entity (C_u) in a given time ,

$$\boldsymbol{C_u = \Sigma E_1 + E_2 + \cdots \cdot En} \ldots(2)$$

If we want to deal an individual consciousness then ($C_i = E_x$)

$$\boldsymbol{C_i = \frac{\varepsilon_1 + \varepsilon_2 + \cdots + \varepsilon_n}{T}}$$

$$\Rightarrow \boldsymbol{C_i = \frac{\epsilon}{T}} \quad [\boldsymbol{\epsilon = \varepsilon_1 + \varepsilon_2 + \cdots + \varepsilon_n}\ ]$$

Where T = Total time and Є= Total experience which is same as equation (1) discussed above.

The individual consciousness (C_i) is the fragment of the Universal consciousness (C_u) . We are sharing the common consciousness even if we happen to be living in different part of the universe. The rate of experience per time may change but the process and the order remain same throughout the universe.

Continuous Consciousness Model

Consciousness is continuous. The Consciousness of the offspring is the Consciousness of their parents and ancestors. The same Consciousness is transferred to their offspring during the process of reproduction. The subtle forces like desire, emotions, intelligence, instinct, intuition etc. are psycho-biologically passed on from one generation to another. One may function as an individual organism with a autonomous body and preferences but it has inherited the Consciousness of his parents and some of their subtle qualities along with the genes which may or may be expressed unless provided with a suitable condition and worked towards it.

Attention Gap

We can direct attention to any part of our body we like. It can move to our stomach, to our brain, to our genitals and so on. Though we can easily shift our attention from one part of the body to another part, we do not cover a real spatial distance as we feel. Rather it is a mental phenomenon which allows the mind to specify its target. This attention mechanism similarly operates in the external world where the attention is directed outwardly. Experience is only possible when the mind set its target to a particular point. Like when the mind directs its attention to the ear we hear sounds available in the auditory space. When the mind recognizes a particular fragrance it set its attention to the olfactory senses. Attention can be also be directed to any part of the visual field. There is an attention gap when we withdraw attention from external (physical) world towards thoughts in the mind. We cannot have attention to both inward and outward space simultaneously (or in two points at a time). The series of thought that appear in the mind require attention for their appearance and dissolution. Attention is not always object directed , we can also have attention of nothing (here nothing refers to targetless point). This does not mean the attention is lost, it only suggest that it is waiting to be joined.

Sensation and Perception

The first organ which enable us to see colours or light is the “eye”. But let’s look at the eye itself and the story behind its origin. Every sense organ enable us to experience something or other. The experience itself does not occur in the world. Everything we perceive must have colourand form or structure and should be individuated to be able to experience it. When we experience two colours(say, Blue and Black) we have two different experiences. This produces two mental models of colour we named as Blue and Black. The question arises how does these two colour differs cognitively ? And the next question is how do you measure the difference between the two colours? When the mind tried to differentiate what is the standard of measurement it has used to separate it qualitatively. Each colour arouses a degree of emotion in our mind. They do not generate emotion by describing it as a sensory or sensual phenomenon. It is causally affected by what it perceives. You feel different emotion to different colours. And when you see space with multiple colours the mind reacts to these colours in a different way, as if responding to them. This is also true with geometrical shapes or any other irregular shapes that the given. Each shape generate a unique effect in the mind and these shapes capture the mind and then directs its functions. The image that falls on the retina is inverted and two-dimensional but we experience a four dimensional reality. The nature of image in the retina and the nature of image in the physical world is different. But the shape colour and cognition of these two entities are almost same. This is because the mind treats all physical objects as mere shapes by adding mass in them. The experience od solidity is an illusion. It is the aggregation of constructs which can be disintegrated both physically as well as psychologically. But there is no causal relation between psychological disappearance of object and physical degeneration of the object while the opposite has been observed.

The mind can understand the things only in relation to something else. This is the only condition where intelligence comes into play. I observed this amazing phenomenon when I saw a carpenter measuring and marking the wood he wants to cut with a pencil. What amazed me was that he was not marking the only part he wanted tocut but he was extending it to the extent that help the intelligence to measure the straight line (Law of Closure).

The intelligence can function only in relation to something else otherwise it cannot not make any sense and hence stays at rest. Theinvisible lines that the mind can see iswhat I called the *perception without pure observation*. This proves that the absence or silence between the lines or any adjacent diagram helps in producing a order which the brain can understand or make a sense out of it. Let’s try to draw a straight line. The only way to confirm that it is a straight line is by drawing a straight line parallel to or measuring it by a ruler. This comparison is the tool of intelligence. Without variation or duality there cannot be comparison or functional intelligence.

The characteristic of intelligence includes the differentiation of two consecutive experiences with the help of memory. This happens in the following process. First when we perceive something there is instant memory which lock the initial experience then when there is the second experience it instantly compare it with the prior one and if the experience differ in any

respect than only it is going to lock it again. Each experience is an independent one (qualia) but when we use intelligence to understand something then , the mind uses these set of experiences with the help of thoughts to create an order ,which is again perceived without true visual perception. Lets bring the straight line example again, while you were drawing the straight line you have a mental picture of the line manifested within your consciousness before you actually draw the line. This perception independent of eyes, light and object is the one we should take into consideration for the understanding of mind and consciousness.

The sense of something or the other can only exist when there is separation from the experiencer and the experienced. Anything that is experienced is always in the realm of consciousness and always possible through a perceiver. But here we are going to address the nature and awareness of consciousness itself. The brain is sensitive to all kind of stimuli and responds accordingly in a random manner. The feeling of pain and pleasure and the ability to distinguish between the two , is the behaviour aspect of the consciousness itself. The normalbrain can distinguish various shapes ,colour , texture and quality of materials without getting confused. This suggest the cognition of the consciousness and the ability to distinguish between objects is the intrinsic property of consciousness. Another interesting character of the brain is the power to remember what is sensed immediately after the experience .

Fig 3 : Flow of information

This is kind of pattern that the consciousness follows to know what it is perceiving though its senses. The consciousness has the ability to know and also record what is know , which is a complex structure to understand . The ability to recognize the things is the unique trait of the consciousness. The contents of consciousness are shaped by experience and knowledge in various forms which is directed bythought which is not aware of is existence . The awareness of thought gives birth to the thought itself . The thought depends upon the attention of consciousness. The attentionitself is breaking apart to create thought , which is directed by desire to put it into action .

Visual Perception and memory

Fig 4 : Physical vases and their mental representation

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Auditory perception and memory

When we listen to our favorite song for long period of time we found it ringing inside us. i.e inside our consciousness. Unlike mental picture , sound is not perceived completely at once but it is experienced gradually. Consciousness plays an important role in the way we experience the sound in us. The moment we feel the urge to pay attention to a music, song or a speaker , the attention factor is elevated to function and follow the sound which in turn may or may be interpreted by the mind. The sound or words which are familiar to us will be picked up because the memory recognizes it due to prior experience. The experience of sound is discontinuous as it travels through space, ears and finally to the consciousness. A remarkable process happens in the consciousness which is the attention is pre-requisite to manifest the impression of the physical sound. The various points where the intensity of attention is relatively less or negligible , the reality of conscious experience of the sound collapses. Hence, the information cannot be translated into mental impression and the memory fails to remember it. Memory comes in the second phase of any experience. During a novel sound , we do not posseses memory but when we experience it for the second time there is involvement of memory. The attention is like waves and it fluctuate all the time. The impression is formed in the consciousness where the attention is directed by the mind to act. There is always a shift from one sense organ to another. The same attention is involved in both biological sensitivity and psychological sensitivity. When we are exposed to multiple speakers at a time the mind finds difficulty in achieving the qualia and therefore withdraw attention from all the speakers. The listener will not be able to listen in spite of normal and functional ear because of the negligible involvement of attention.

Spatial Cognition

We cannot experience the distance directly. When we observe something we measure the distance of the object from the observer. Each object placed before the eye represents a spatial distance from the observer in 3D space. This space between the object differs from each other

depending on the distance and size of the object. If an object is larger then the other and is behind it, it appears to be part of that larger object. This is because the mind can not separate the foreground from the background if it does not experience it from other angles. The foreground and the background is divided by the spatial sense of consciousness which is constantly being added in the conscious experience.The consciousness can withdraw and extends its attention towards the object at distance and also bring it towards itself up to certain *Spatio-attentional* point the consciousness can not produce the space to generate the conscious feeling of space itself. When you close your eyes while you are in a vehicle through you are travelling in space and time you don't feel the space moving trees and other vehicles the brain constructs the experience of motion in space. Moreover, while moving we seem to reach at different objects when the observer comes in contact with the perceived objects. There is no different between object coming towards the observer or the observer moving towards the objects. Both these phenomenon are experientially same.

Natural Intelligence

Natural Intelligence can be defined as the ability of the mind or active consciousness to integrate, differentiate or create a meaningful expression from various stimuli to suite the environment.

Types of Intelligence

- Biological Intelligence : It is the intelligence that ensures the survival of the organism and the continuity. It is mostly manifested as innate behavior. e.g blood clotting , closing of eye lids before bright light, self replication , sexual selection etc. It is the most dominating form of intelligence.
- Rational Intelligence: It is the intelligence that operates during logical and analytical thinking. It can act only in the domain of causality.
- Emotional Intelligence: Intelligence that is independent of rational and reasonal factors and mostly guided by emotions providing individual gratification.
- Coordinational Intelligence: This intelligence is the result of harmonic coordination among different parts of brain (different forms of intelligence) which allow us to create a new order. The intelligence is aided corpus callosum and is a major source of creativity.
- Intuitional Intelligence: Intelligence that is unconditional and cannot be directed is known as intuitional intelligence. It is the subtlest form of intelligence and is rarely used.

Significance of Intelligence

i. It helps in decision making process.

ii. It ensures or supports the survival of physical or biological system.
iii. It recognizes pattern or order in a system.
iv. It can differentiate information at different levels.
v. It controls and coordinates complex systems.

Limitation of Intelligence

i. It is mechanical mostly.
ii. It depends on information (pattern) to function.
iii. It is generally directional and always demands a motive.
iv. It cannot work on itself.

Feminine Intelligence

This is a unique form of intelligence generally found in women. Although men can learn to use this form of intelligence sometimes if they want to . This is because the female have XX- chromosome which strengthen their emotional intelligence to a degree that it surpass the general human intelligence. In addition to that, women also have true realization of motherhood by directly giving birth to the offspring and hence strong emotional connection with the offspring which resulted in the effortless understanding of emotion. Due to absence of Y-chromosome , the feminine intelligence has few rational elements in it , which is inadequate to express itself. Y-chromosome is a newly evolved chromosome with its own unique features while X chromosome is much older and maintained its purity for millennia.

Emotions

Emotions are the qualities associated with certain experience that may be quick or long lasting ,pleasant or unpleasant , excitatory (joy) or inhibitory (sadness) that vibrates in our consciousness.

Primary emotions

- Anger (adrenaline)

- Fear (adrenaline, norepinephrine)
- Sadness (Cortisol)
- Joy (Serotonin, dopamine)
- Love (oxytocin)

Fear and *Anger* are the oldest known emotions which are still functional and expressed in many humans and non- human animals. These are essential emotions that ensures our survival , security and continuity as species. When fear is expressed in the conscious mind , anger hides in the unconscious and vice versa.

Love is originated from the development of phenomenon of parental care in early pisces and continue to exist till humans. By loving someone or something we create a Lover in the mind which will run various other operations and regulate our behavior.

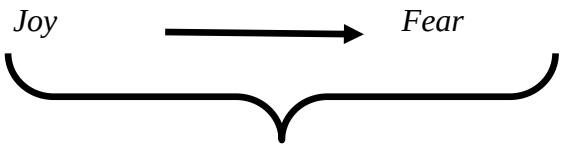
Sadness and Joy are perhaps expressed only in mammals.

		Fear	**Anger**		**Love**		**Sadness**		**Joy**
Pisces		Expressed	Expressed		Expressed		N/A		N/A
Amphibians		Expressed	Expressed		Expressed		N/A		N/A
Reptiles		Expressed	Expressed		Expressed		N/A		N/A
Aves		Expressed	Expressed		Expressed		N/A		N/A
Mammals		Expressed	Expressed		Expressed		Expressed		Expressed

Table 1: Table showing the expression of emotion in different class of vertebrates

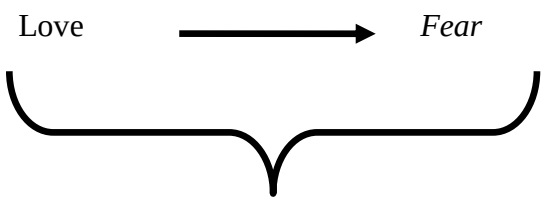
The emotions that mind experience are gradually produced and restored over millions of years of accumulation of various psychological activities that the organism performed and some of which are passed on to its progeny through the consciousness of the parental chromosome. Emotions are inter convertible with the formation of a byproduct which may be another emotion.

- *Joy* when converted into *Fear* , it results in*Sadness*



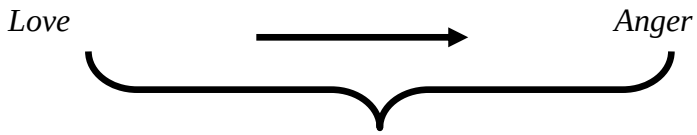
Sadness(Punishment)

- When *Love* is converted to *fear* , it results in *anger* and *sadness*



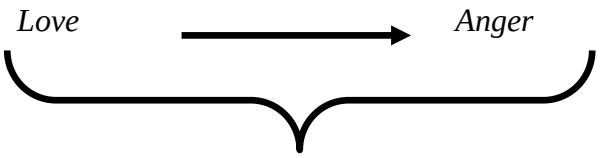
Anger , Sadness (punishment)

- Under normal condition when *love* is converted into *anger*, it produces *regret*



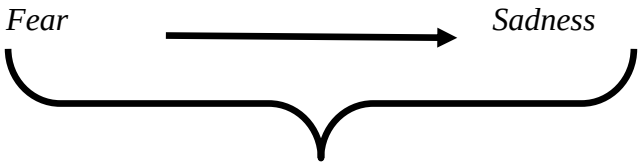
Regret (Punishment)

- Under abnormal condition , when *love* is converted into *anger, it* may give rise to *joy*



Joy (reward)

- When *fear* is converted into *sadness* there is *anger*



Anger (punishment)

There are also other kind of momentary emotions that we experience which I call *Quick emotions* such as shame, disgust, surprise, relief etc. Emotions are higher order cognitive functions.

Joker Effect

When one hides the original emotion and exhibit another emotion or does not exhibit emotion at all, this process of acting is due to Joker effect. Here, mind has to take care of the environment where the emotions are being shown and have to exhibit the appropriate emotion either to manage the situation or to achieve certain goals. Mind is trying to create

equilibrium between two states simultaneously one that comes naturally and the other which it has created.

Imagination

Imagination is thinking in terms of image. Humans have this unique ability to direct or conduct their thoughts in a particular direction. Another way to look at this is that the mind always wants to enhance its experience , sometimes switching away from the reality , and follow its independent desires. Physically these images doesn't exist. Imagination is purely subjective and private. It supports all kind of desires , expectations and assumption. It is directly related with the memory that is stored in an individual. Memory also record what we imagine or think. The power of imagination is highest during childhood as mind assume the unknown facts and creates stories to temporarily satisfy itself. As mind grow up it don't rely much on the imagination and uses intelligence to understand things. Mind can also perceive without pure observation as discussed earlier. This ability of mind is exercised during a imaginative process, which is followed by the associated emotional reaction. Imagination is also the cause of false memory as the mind can't distinguish between the real image and the mentally produce image . Mind is remarkably good at imagination. It can perform complicated operation like apodyopsis. Imagination also help the intelligence to communicate with itself and can help to decide action. Everything we do happens after an imaginative construction by the mind within the consciousness which we may or may not be aware of. Imagination help the mind to create , learn and organize stuff that are someway useful for the present and future.

Desire

Desire is generated from disorder. The mind exercises the desire to bring about a change in the biological system which leads to some kind of action. The mind without desire is non-functional . Each desire carry a function (potential function) to be performed by the actor. Desires can be triggered externally or internally. External desires arises due to interaction of mind with its environment where as internal desires are rooted in the instincts and urges. Every action we perform have their origin in these desires. The journey of desire starts from the consciousness but it ends either in the mind or as a physical product in the world. Desire moves the body through mind. Desire in itself is incomplete. Each desire has its existence in the physical world only after it comes out as action or activity. Desires are script for the body and mind which it plays out in the body and with the body to accomplish the action. Some desires are not turned into any action or motives, these desires are sent to the unconscious through sub-conscious , where they finally rest within you. You are the embodiment of your desires.

Levels of Desire

Some desires may have many levels depending on the intensity of functionality. Take for instance, the male partner has the desire to suck the nipple of his female sexual partner but there is no valid reason for doing this after the individual has grown up. While we were child

we were breastfed to have the necessary nutrients and immunity against the possible diseases. But the craving for sucking nipple lasts in the mind of the grown man and may also get satisfied by his sexual partner through a pseudo-breast feeding. This does not give nutrients to the body but it may give mental satisfaction which he gets earlier as a baby. The remnants of the desire are still functional and are operating in one form or another. There is no way of completely ending the desire as it is not physical. In mental realm nothing get lost completely, it just get suspended.

Regulating the desires

You cannot make into work your sub-conscious though we need it to develop new insights into our thoughts. The sub-conscious is more intelligent and holistic than the conscious mind. The laws of mind (if there is) has to be different from the physical laws. The sub-conscious cannot be directly controlled only conscious processes with intentional thoughts can be operated upon. The intensity of lighter thought or desire is more than the rigid thoughts. It is not the sub-conscious follows the conscious but it's the other way round- the conscious arises from the sub-conscious. Thinking or desiring does not help in getting things done. It's the nn-thing in thinking and non-desiring in desiring that is more effective. As long as you have the sense of agency you have hold the natural flow of energy and information. Once you realize how this mechanism works you can have right desires and actions.

Mental Model

The mind creates the model of your Self and the environment in which it functions. The body mimics the activities of your internal model of your-self. Before you actually raise your arm , the mental model of you has raised its hand, which either get manifested as actual body movement or does not appear. Most action we perform is a mimicry of the mental model. The mind creates the model of itself and the reality with the information it receives from the senses and manipulate it to give the best possible picture of the external reality in our conscious field. The mind cannot directly access the external or objective reality nor can it introduce it into its own realm. It only provides the model in which the individual seem to function. This model is homologous to the model of the self and the environment we create in our dreams. Hence , it's very difficult for the mind to distinguish between the models of the reality it constructs. The mind synthesizes the physical reality in the same way as it designs the dream. To experience anything the mind has to construct a model of it, without that model the consciousness cannot experience anything. The consciousness can only experience the model after it is constructed. After construction the model is maintained until another model is created. The past models acts as Memory . The models are not real although they can be recreated. The past is nothing but the experience of past model of reality. The present is the present model of the reality and the future will be the updated model of the then present reality . There need to be a continuation of these models to appear real in the consciousness. The models are not conscious of themselves. The gap between the experiences of the successive model of reality is filled by consciousness. The individual can also stop to make mental model of himself/herself psychologically. This does not affect its physical existence though.

Thought and Thinking Mechanism

Thoughts are manifested in two forms i.e images and sound. The thought arises from consciousness itself . And also thought has its origin in the biological or natural drives. When the body is dehydrated the mind get the signal of thirst from the body. To make the organism to drink water, the mind generates the thoughts of drinking water as an image and related images. Similar is the case for hunger and sexual desires. When the body needs energy it feels the urge to eat and the mind generates thoughts of food. When our gonads matures and produces fertile gametes the body feel the urge to reproduce or masturbate , so the mind produces thoughts that drive us to the goals. Thinking involves intuition.

Types of thoughts

i. **Primary Thoughts**–It results from the sense of being harmed or the urgency to defend oneself to avoid pain or suffering and to ensure survival . These are regulated by fear. Example , you will remember something all of a sudden , even if you are completely busy and involved in a task, if it will maximize your emotional or physical pain in future. So that you can get rid of it as soon as possible.
ii. **Secondary Thoughts**- These are the conditional thoughts that arises from the sense of morality to harmonize the social order.
iii. **Tertiary Thoughts**- These are thoughts that are induced by the stimulus.
iv. **Quaternary Thoughts**- These are thoughts of problem solving, private imagination and fantasies (self entertaining thoughts). It is accompanied by joy.

These thoughts are shuffled and arranged in various patterns depending on the degree of intensity of thought. The sequence of intensity is followed in the given manner. [Primary > Secondary > Tertiary > Quaternary]. Each thought trigger a particular emotion and brings a biochemical change in the body. And these changes again regenerate other thoughts and this process goes on until one voluntarily stops it. The mind sometimes play the thoughts randomly without any particular purpose. In this case the mind has no direction or operation to perform. On the other hand while we think in a particular direction then the thoughts are arranged in a definite pattern to fulfill the given operation.

Memory and Cognitive codes

There are different ways in which the information are acquired and stored in the human mind and body. As we have codons in the genes that determine the phenotype of the organism similarly there are possible some form of cognitive codes used to recognize prior experiences and to generate new codes for new experiences. The experience (information) that we can acquire through our senses have its blue print already present in the consciousness. In other words no experience can ever be experienced unless it has its cognitive code already in the consciousness. Both external and internal experience of reality has its natural code in the consciousness. Each experience in whatever form (images , sound, scent , taste and tactile)

either conscious or unconscious when introduced to the individual consciousness is converted to its distinct cognitive code. The mind with the help of consciousness recognize these codes and direct the predetermined response carried out by the brain and nervous system with the aftereffect which is again stored as memory by generating its unique cognitive code . In this way the mind recognizes and stores memory in the individual consciousness and allow the organism to function sensibly.

Lets understand how the mind reads and reacts to the subjective information by studying *nudity and its impact on human mind*. When we look at a nude body there is a mental representation of that image which the mind can read it by decoding the cognitive code of that particular image. In reaction to the image the mind causes arousal and dictate a set of behavior , which are accompanied by biological intelligence , sexual desire and activation of biochemical changes. This psycho-biological process is only possible if there is already a blueprint of the visual data which the mind have access to after decoding the perceived data. For instant , let's assume the mind is unfamiliar about the data , in this case how can it respond to a stimulus in a deterministic way (sexual arousal in this case). This suggest that each experience we perceive , from different colors to different emotions has a cognitive code which the mind uses to store it in the natural memory of individual consciousness.The quality of memory that is stored in the consciousness depends on the intensity of qualia . The natural memory formed in the consciousness helps the individual to connect different experiences and also to learn new things , without altering the older experiences. Though theses memory does not exist in reality , which we will discuss later , it has a profound impact on the individual consciousness and also dictate the actions of the individual. The memory also helps the intelligence to function properly relating and coordinating various information. The natural memory is affected by the various parts of brain. According to current research the main parts of the brain involved with memory are the amygdala , hippocampus, cerebellum and the prefrontal cortex. The memory formed and stored is the brain is useful byproduct for the mind and helps in thinking, learning, recognizing and so on. As we discussed above the cognitive code is the raw material for the formation of natural memory and is a essential ingredient for higher order cognitive processes. It is a living and psycho-dynamic process continuously occurring in the brain and consciousness. Indeed , natural memory is a key factor primarily in the humans , as it propel many other psychological faculty used in the cognitive process and many activities that we perform in our everyday life. The various mental faculties coordinate among themselves in a harmonic way to carry out a subjective reality.

The mind thinks and respond to the pictures and is incapable of reacting to numbers, texts and symbols. Only after converting the words into pictures it can think and respond. When we say the word *Phallus* , the mind doesn't get excited by imagining the word in its textual form . When *Phallus*is converted to the pictorial form of 'erect penis' the mind feels the erotic state. At the same time there are some sound frequencies that may alter the state of mind or stimulate certain experiences artificially when chanted repeatedly. These sounds have to align themselves to the frequency of active mind. These sounds also act like codes for the mind to set it into some definite order for some time.

Centralization

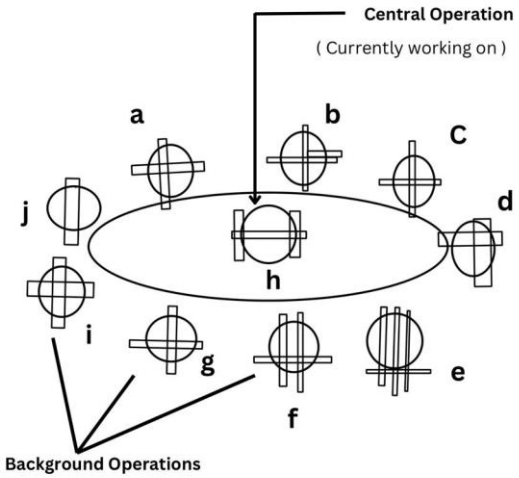


Figure 5 : Centralization of a particular mental operation

The mind can process multiple operations by prioritizing the necessary operation one after another. The operation which is important is placed in the centre to work on it and the rest work in the background. It depends on the requirement which operation will be centralized depending on the circumstances are the desire of the individual. The background works does not stops even if we are not conscious of it. And when it finally solve the task it is sent to the conscious part of our mind in the form of thought. This in turn may trigger emotions after the completion of task as a reward.

Patterns of Understanding

There are three main methods by which the mind understand or processes information in our brain .These has been briefly discussed below.

a) Categorizing [C- Process]
b) Replacing [R- Process]
c) Layering [L- Process]

C-Process

The mind understand information by putting them in categories according to their type depending on the nature of information . For example , Category like Living or Non-living , Good, Bad or neutral, Fast , slow or Normal , Smart, dull or average. The mind first recognize the information and then send them to a definite category .Only after putting the information in any definite category the mind can proceed further. If we failed to put a piece of information in any pre-established category then the mind have to generate another special category to keep and use the information later in the system.

R- Process

The information that is held in the mind are replaced with the more accurate one over the cognitive period of understanding. The old or inaccurate information are gradually removed from the system. Now, the processing of data takes place with the updated information. This processing continues till we get another updated knowledge.

L- Process

The mind reacts to the words like higher, lower or deeper by creating layers so as to understand the architecture of the sentence uttered. The mind follow the words and according it created the layers. When we hear Physics , Chemistry , Biology and Psychology any academic researcher would easily construct the layer of discipline from Physical to Psychological domain .Similarly , when we hear body, mind and soul we form three layers in our mind.

Mechanism of dream

We all have experienced dream at some point in our life or may be last night. Dreams are a continuous series of thoughts which are played in the consciousness until the dreamer awake it into reality. There are numerous factors which induce dreams in the consciousness. One suchimportant factor is the '*unconscious fear'* . When the mind unconsciously avoid or suppress certain desires and thoughts , these are expressed in the dreams. Other factors include overthinking, continuous perception of similar information , private imagination etc. The dreamer can never be aware of the state of dream unless it is a lucid dream , this is because the mind can never differentiate between the real images (physical images) from the mental images . The mental representations that occurs either from the perception or imagination have a common responsive pathway in the mind of the individual consciousness." Dream is completely real until the dreamer wake up" , This implied that the knower is always deluded by the information that enters into the field of consciousness by any means (through the senses or through the mentally induced perception). This suggest the we don't have a direct access to the reality of anything. The reality that is manifested and played in our consciousness is mere representation of the world outside the self. Dreams reveals the fundamental nature of mind that it cannot differentiate the reality from the imagination. This again suggest the mechanical nature of the mind. The unique ability of mind to reflect and recreate the reality or dream by integrating different phenomenon is a debatable topic and need further research for complete understanding of its true nature.

Formation of the self

The Ego is the first desire, first emotion , first memory and the first intellectual operation in the realm of mind. The Ego has the Self element in it because of the self origination. Every individual including mind has some sense of *selfness* in it. This *selfness* is the centre of all our selfish activities. The mind when accumulates a great deal of information , produces a feeling which we generally identify as the self. The self gradually develops after the birth of an individual. The mind initially operates with different forms of intelligence discussed earlier and then after undergoing various mental activities for a long time it build itself up into a self . A self is a rigid and lightly structured mind which in turn carry out various cognitive activities (creating , comparing , analyzing etc) by keeping itself as the center of reference. In other words , self is a specialized mind which acts differently in different environmental condition depending on the type of experience it holds and intrinsic nature of the individual. This self turns to a personality as times passes and takes different shapes , letting itself controlled by the nature of mind. The diverse experiences with associated emotions are subset of the self and is subject to constant modification. This process of modification generates learning as a byproduct in the individual. The self is strengthened by

private conclusions and opinions about the world and about oneself. It's really difficult to get rid of your own opinions and point of views because the self had already established a structure according to which one is made to react in a given situation. The self can be broadly divided into *strong self* and *weak self.* The individuals with *strong self* have a strong personality and stick to her opinions , believes and have high self esteem. On the other hand , the individual with *weak self* are self critical , open minded , adaptive and are vulnerable to influence. The *weak self* individuals don't have a definite personality as they orient themselves according to the given situation.

Nature of influence

The self which is developed or seem to be have build up by itself to a degree with which we function as an individual. Each experience conscious or otherwise we have been through have some impact on us.

Conditions for an influence to take place

- Weak self ,with unconscious sense of inferiority.
- The qualities of the existing self should be different from the one the individual is willing to have (Generally, opposite qualities).
- There must be considerable amount of attention and time towards that.
- Assumption of the state to be higher and better than the present state of the self.
- Introduction of novel elements into the self.

The influence that the self had , affect the self and modifies it to certain degree and may change the behavior of the individual. Some influences are very subtle and we rarely exert conscious control over them. These influences get manifested in the actions and by studying these actions , we can know the origin of the particular influence. Getting influenced is a major contributor in the process of learning and exploring things that we encounter during our lifespan. The phenomenon of influence is very subject specific and may not last for longer period of time . It is unpredictable until it occurs but can be induced by intentional stimulation , to some extent. This is an irreversible phenomenon. We hardly have any control over this phenomenon. The individual may not be aware of these influences throughout his/her life as it affects the root of the self and constantly grow and evolve. The chances of influence to take place depends on the older self, as it get weaker and weaker after frequent invade of stimuli. The modified self will dictate the behaviors and actions of the individual further. The lack of rigid control over oneself may be one of the cause of the psychological influence. Influence may be beneficial or harmful depending on the consequence that it bring about , both to the individual and to the society. The influenced self can never understand itself without the self awareness. In other words being aware one's own activities is the only way to realize that you are in an influence.

Experience of Similarity and Dissimilarity

What happens to our mind when we observe similar things. If two forms are similar they are one and the same for the mind. Same is for color. But in case of color it can have different shades. The consciousness is locking itself with each conscious experience. These experiences are linked together by intelligence. There are infinite shapes but the mind responds to definite shapes which follows certain order or symmetry which it recognizes innately. The mind can understand something as long as it has some pattern or structure. But the question is how do we differentiate one shape from another ? May by using its opposite. For example, we understand circularity from and by non-circularity. We understand the circular nature of circle by regarding it to be more symmetrical and uniform than other two-dimensional counterparts. Moreover, two experience can never be similar unless there is similar form in it. Take another example , Love . There are different forms of love , though we mean the same thing while experiencing it. When we touch different surfaces we feel different and we recognize similarity or difference in them. Hardness does not feel similar to softness and vice-versa. In cognition too , the mind can sense similarity somehow like in case of two similar theorems or formulas , even though they have different representational forms.

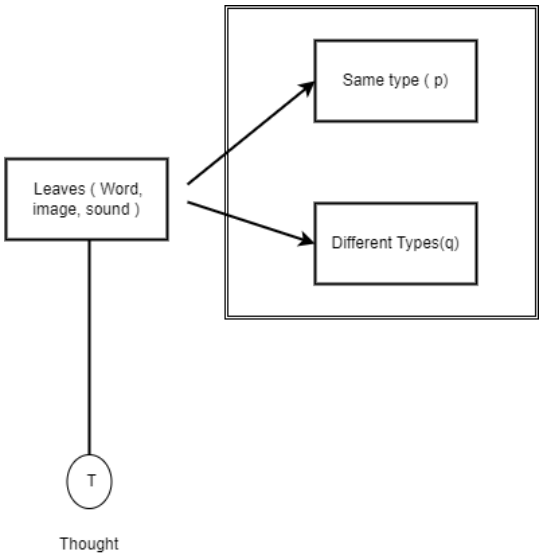


Fig 6 : Different paths of cognition (in processing Leaves)

The mind after constructing idea of an object it process according to the requirement. It does not distinguish data in the initial cognitive process and wait for more details to arrive at the result. Let's take leaf or instance , when we hear a word leaf , the mind creates a single class of leaf but when we say leaves , mind constructs leaves of two categories i.e leaves of same structure and species (p) and leaves of different shapes and species (q) . Both these leaves have different cognitive value which gradually appears in the mind. Leaves (Ls) can be of same type or different, hence plural , in contrast to a leaf - which is always singular. Plurality presupposes single or multiple singularities. Difference is the marker of an experience. Similarity does not provide any recognizable experience rather it is self-subsuming.

Vision and Cognition

There is a deep relationship between the visual perception and cognitive processes. The perception initially dictates the cognitive behavior of the brain by recognizing and differentiating lines, curves, colors etc. that display the object. Then its motion is being recorded and its pattern (if it has) is being detected. If it is random then its difficult for the brain to predict the behavior of the given object in the visual space. The mind reacts differently to different shapes or facial expressions and also acts differently to the same object or shape with different orientation. Mind individuate the object from its background and tries to make sense (or assign meaning to it , if it is new) to it. Psycho-geometry is a parallel relationship obtained from the objects in the visual field with active motion and its equivalence produced in the human mind to perform higher cognitive operation. What is perceivable are easily cognizable . Its hard to imagine an impossible image (like Penrose triangle) mentally without Artificial Intelligence or some drugs . This is because impossible images are not cognizable by human mind and hence not understandable. Even if we speak of non-pictorial experiences still you have to convert these into pictorial forms to make it cognizable. Imagination and geometrical laws has an intrinsic relation which resonates with the possibility of an image formation which can be perceived naturally or by constructing it physically. A single picture can be observed in more than one perspective like the Duck-Rabbit figure. This is also true for other cognitive process like understanding. The same understanding can arise from different cognitive pathways. The lines and curves can be arranged in any shape but not all shapes can be cognized for higher order mental processes until a pattern emerges from those visible shapes. This emerged pattern is again a shape which carry out a higher order cognitive operation. When these patterns are compared with one another we may be able to perceive another structure which is higher than these patterns and may the above structure help us building a more higher cognitive base from which we can operate and function accordingly.

Visual Weights

When an observer observes something the view may differ depending on the weight of the images. Here weight does not refers to the physical mass against gravity but the number or diversity present in the visual field. It may be the number of object or number of colors of

the same object or the entire visual field. A view having simple colors (one or two) and few lines in it can be considered as having minimum weight. The more lines and colors we encounter the vision becomes noisy and the mind carries more visual weights causing difficulties in higher cognitive operations. The lesser weight we perceive the mind feels a sense of stability and harmony and can be easily cognized and transferred for higher mental process. It's quite easy to track a single object in the visual field but it's completely impossible to attend to all the objects of the visual field all at one and to keep track of their movements. Things becomes more enjoyable when there are less distracters and we direct our attention to our desired object to isolate it from other and magnify its features to use it for higher mental operations.

Mechanism of cognitive biases

Halo Effect , confirmation bias , Framing effect , clustering illusion etc. are common cognitive biases that mind usually go through. There is no definite pattern of this subtle mental process but one can argue that the strength of these effects decreases as we become more and more aware of ourselves. The mind can only think in one direction at a particular time . The mind processes similar information and also uses its definite pathway to experience a feeling at a particular time . It cannot change the pathway after immediate manipulation of information to get a completely naïve experience. Consider the case of confirmation bias , mind tends to follow the same pathway again to reach to the same conclusion / experience , completely resisting the contrary points. In the case of Halo effect , the mind nullify the other traits as it can follows a definite pathway of understanding in a given time. It is impossible for the mind to simultaneous process similar information and come with two or more different results. This is why sometimes we face problem in seeing things from others perspective as we have followed different route to understand the same. The information that we receive first and also the way we perceive it and process it in our brain has very strongeffect ascompared to the succeeding ones. Cognitive bias islike refraction. If information processing undergoes cognitive bias , it get bent and we cannot see or think straight. In order to minimize the cognitive biases the individual should retro-introspect and revisit the cognitive path and try to approach it from different angle.

Mind and Actions

The mind and the body are intimately connected with each other. The mind has an internal dynamic world where it has the image of itself and also has a sense of body (which it operates from within) with its position and orientation in the spacetime. The mind construct a reality every time you wake up from deep sleep and give you a series of experience joined together by memories to function as an individual entity. You act psychologically (any given task) before you physically do that action. Like when you raise your hand , you already have raised your hand in your mental space before you raise your hand physically. Every act of your body is the act of your mind. The pictures you imaging , the words you utter , the thoughts you think , the emotions you feel , all bodily postures and movements and the interactions of body with the environment are directed by mind. The mind constantly update its world with respect to the external environment and the information it receives from it. The spatial orientation of the body ,the perception of time , and qualia are being united together by the consciousness keeping the mind at its center. The mental world tries to mimic the external world by construction a possible picture of the reality. The reality generated by the mind with space, time, colors, sounds and sensations gives a model of reality which is constantly being updated until it cease to exist. The nature of external reality depends on the system where the mind operates and the nature of the sense organ and the capacity of information processes. The same reality can be experienced differently by changing the spatial orientation , ways of perceptions and state of mind. We see the reality the way mind represents it in the consciousness and we believe that reality to be the only accessible form of reality possible for the given system. Mind generates the internal world where it lives and tries to make best model by interpreting the information that reaches it through the senses.

Action is only possibly in stability. When we desire to pick the cup from the table we goes through several mental processes. First we do not want to keep the cup on the table- by breaking its state of rest (negative will) and at the same time we want to drink coffee (positive will). So we stretch our hand towards the cup , which is an action. Any action is a result of both the will which makes you move or set you to action. Generally, we measure positive will for the action we perform. But the positive will is always balanced by the unconscious negative will to make our decisions. Action is produced from the stability established by the pull of two opposite will. Action cannot be produced from either of the will. Only one part of will cannot give rise to any recognizable action (Both excitatory and inhibitory forces works simultaneously to cause motion).

The idea of acting differently from the way you are acting now comes to you by looking at others. If you focus on the way you want to act it would be very different. Your actions are dictated by the society or by you sub-conscious. But none of your actions are original . As long as you are following a pattern that you have adopted from outside , your actions are just imitations. The idea of a different action enters into you either to confirm the established behavioral pattern or a revolt again that pattern. For instance, if you forget how you are taught to act in a given scenario you will probably act completely by your own natural way and that will be the natural action that can be hugs, kisses , defensive acts or romantic acts. It

cannot be lied because lying itself is an artificial action that has been learned from the society. When actions are organized by the society it looses its intrinsic vitality and requirements. It's no longer free rather is a form of dictation or confirmation guided by a sense of responsibility to sustain that structure. Action can be anything you do that is not dictated or conditioned by the society or individual.

Mind and Mathematics

Mathematical thinking probably had been developed around 6000-7000 years ago. The mind get the essence of number probably by observing thing around itself .Lets start with 'something' which suggest *one* [1] or First . we can demonstrate one by showing our index finger or by indicating to the moon in the night sky. What does it mean to understand 'one'? For mind *one* has to be 'something' and twice of that 'something' have to be two [2] that is other than that ' something' . But how does it differs from [1] to act as a [2] or ' Something' varying from the 'Other' cognitively ? The mind does not become numberless when we add zero [0] in our number system. But mentally it acts like a number when and physically it stands for absence. Zero plays a very significant role in extension of number system. In mathematics we have only nine numerals (1,2,3,4,5,6,7,8,9) which is finite in quantity but by adding [0] the mind increases its numerical value until it reaches infinity (∞) .

While the mind takes any of these integers it compute them to give a result according to the quantity it assign with the number . The mind does not process the quantity themselves but rather it processes something else which is not a number or symbol or sign or any representation.

Understanding the essence of Zero

Zero is a unique number as mentioned earlier. It operates differently as compared to other numbers which carry their own value. It represents absence or emptiness. When we add one zero with another zero we get zero. It does not produce anything new from itself. When we subtract zero with zero we get zero. Nothing can be lost from zero as it is empty. While we multiply zero with zero we find it to be zero. Zero cannot be multiplied . It cannot extend itself into anything .Hence its extension is impossible. When we divide zero with zero it becomes undefined. It is because we are not sure if the absence can be divided quantitatively.

Calculating *Nothing* with N*othing*

(Nothing) + (Nothing) = Nothing

The mind creates two voids and tries to add them to create a new void

(Nothing) – (Nothing)= Nothing

The mind cannot subtract void from void .

(Nothing) ×(Nothing) = (Nothing) **{ Impossible}**

It is impossible for nothing to multiply into nothing.

When nothing is available , how can it be divided with itself .

Calculating *Nothing* with *Something*

One can be added with zero which will give one. And also zero can be added with one. Does both means same to the mind ?

(Nothing) + (Something) = Something

(Something) + (Nothing) = Something

(Nothing) ×(Something) = Something

0 × 1 = 0 (mathematically)

When Nothing multiplied into something , it must have produced 'something' how can it be zero or nothing *(Cogito-mathematical contradiction*) .

(Something) ×(Nothing) = Something

(Nothing) ÷(Something) = Something

0÷ 1= 0 (mathematically)

(Something) ÷(Nothing) = (Something)

$1 \div 0 =$ Undefined (mathematically)

When Nothing is divided with something we must get something cognitively but mathematically when zero is divided with one we obtain zero. On contrary, when one is divided with zero it is undefined mathematically.

Calculating *Something* with *Something*

When we add one with one we obtain two

(Something) + (Something) = Something

How is this new 'something' different from the earlier one cognitively ?

Multiplying *Something*with itself

1× 1= 1

2 × 2= 4

When we multiplied something [1] with something [1] , we obtained that something [1] .But when we multiplied new something [2] , which is the product of addition of the older something [1+1] , we obtained an entirely new number [4] ; which is equivalent to four something. When we say four can comes from , (a) Four times one (4 something) i.e 1+1+1+1 , (b) Two times two (2 something) i.e 2×2 and also many other ways.

Altering the sign

Considering five [5] for instance , which is constructed from an even number two [2] and an odd number [3] . The product of these number is another number (something) that is five[5]. Adding five with five we obtain ten[10] and multiplying five with five we get twenty five[25].

5+5 = 10

5×5 = 25

Here , when five is added to five we obtained ten but when the sign is rotated 90 degree we obtained completely different result that is twenty five. How?

Problem with addition

When we add one with one we obtain two [2] . That is something [1] with something [1] we obtain a second something [2].

1+1= 2

Something + Something = Something

Considering zero to be a number,

0+0 = 0

Nothing + Nothing = Nothing

When we add nothing with another nothing we obtain nothing (mathematically speaking) .

Problem with multiplication

When one (something) is multiplied with another one (something) we obtain something.

1 × 1 = 1

Taking the case of zero, nothing multiplied with nothing we obtain nothing (mathematically)

0 × 0 = 0

Value of Zero

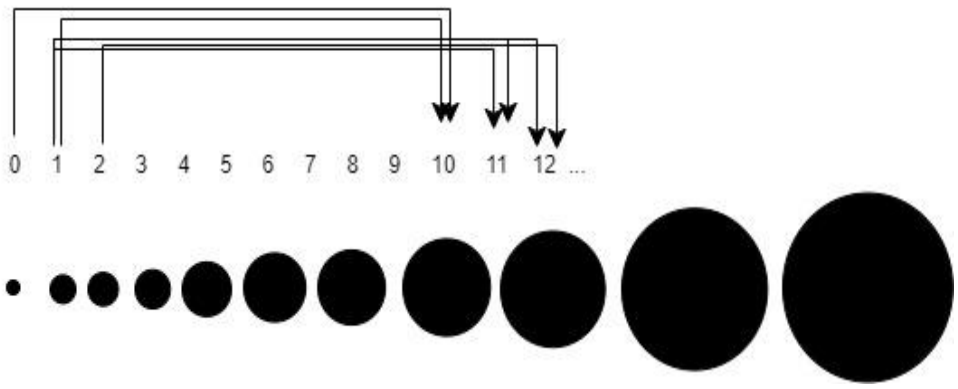


Fig 7 : Increasing size of numbers

Zero increases the value of one by putting itself on the right side of one (10) but it does not specify how much? (It can be infinitely big and can also be infinitely small) . The traditional assumption is 10 is ten times 1 , what if its not?

1x = 1000000

1xx= 100000000

1xxx. .. = 100000…..

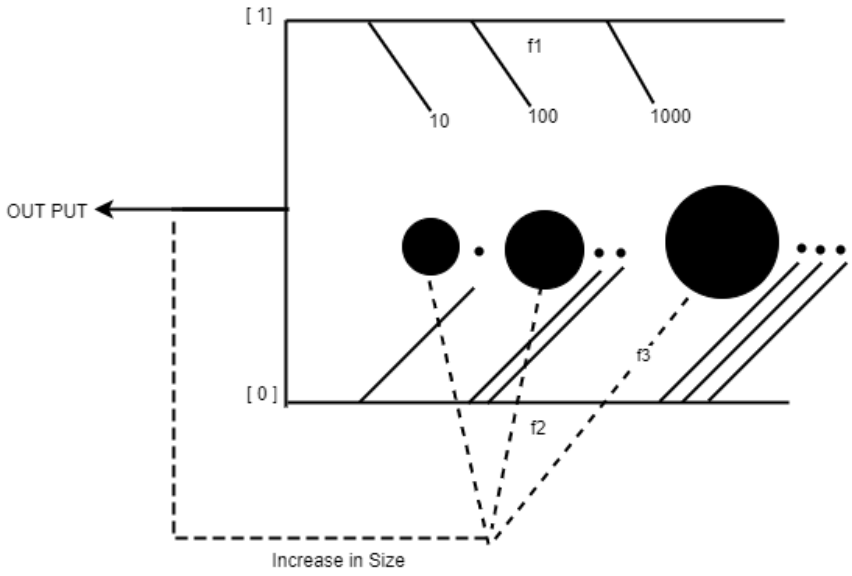


Fig 8 : Three functions are operating while computing zero – f1 (1), f2 (0) and Size

There are three functions operating cognitively while we are increasing the quantity of numbers by adding zero (10, 100, 1000, ….) which are essence of one, zero and the size of numbers.

Analyzing Sacredness

When a mind is exposed to a word like " sacredness " and proposition like " This is a sacred river" What kind of operation it functions in the brain. How can mind have any model (pictorial or otherwise) of sacredness. Can thought create a model of sacredness and perform operations on it and through it. What kind of functional or behavioral operation does it exhibit? In other words, how does mind process 'sacredness' ?

Mind and Music

The mind can be set into a definite order or rhythm. This order in mind establishes harmony which in turn generates contentment. The individual moves (psychologically) from one rhythm to another mental rhythm to function in a given way. The way we think presently is the way the mind has set its order for this particular moment. The mind can process the same data in innumerable ways. And each set of order gives a particular state of seeing and experiencing the possible reality of a fact. The mind has the potential to make you experience the reality which is uniquely real for the individual. The sense data that we experience in the mind also has the potential to reshape the mind itself in various ways. A healthy mind can process a single state or pattern at a given time. There are two possible state of an organized mind. The first state of organized mind is when we listen or tuned our mind to a particular mental state like listening to a particular music or thinking or chanting a particular frequency of sound. The sound that the mind usually find enjoyable are made of that frequency that synchronizes with the mental order. Hence, we are drawn to that state of mind through the

music and get absorbed in it for some time. The second organized mind is the empty mind. The empty mind does not process any external or internal data. The empty mind always try to empty its contents to set itself free from any particular order. The individual with empty mind may not function well in the society. Indeed, empty mind cannot be made empty for longer time. If the empty mind is intensified for longer time the individual may lose its identity psychologically and may not get it back. The working of a mind can be observed in many activities , for instance while solving a Rubik's cube or a Mirror Cube , we can observe the mind in its functional form. The mind turn the layers up and left and down and right and the fingers mimics that to align the colors. We can trace the history of the process of mind by observing the orientations of the body and its different parts.

How the mind put itself in other shoes?

It's a unique ability of human mind to operate functions on behalf of others to acquire knowledge indirectly. It's a very complicated algorithm the way it does that. We will understand it by two levels. In first level we impose our existence psychologically to a thing, which momentarily block the primary pathway of the self from which it usually operates and switch to a new pathway. Here starts the second level, the mind takes a different pathway pretending to be the object , which is nothing but the essence of its features that is stored in the memory and use them in an operation. This process is reversible so the mind returns to its original state after some times and operates with the original self by clearing the primary pathway from where it operates usually. Mind can reduce its abilities by assuming it to be something lower and also can enhance its abilities by assuming itself to be higher. There is no limit to the extent in which mind can compress or expand itself. It depends on what object it is being using as substratum to function and mind carry forth the further operations accordingly. Various operations can be performed by changing the centre of self. The mind can think like a child, a teacher, citizen , artist , poet , scientist and so on. The self does not change it just runs different narratives to experience their perspective momentarily. When the intensity of their experience is high and rigidly structured it may be difficult to get back to the original Self.

Alignment with a Physical System

When the mind uses body to operate a system, it needs to align itself with the system to function properly. For instance, while driving a car, the mind align itself with the car through the body to co-ordinate for a safe drive. Similarly, which using a computer the mind have to take care of various functions like perceiving the screen, coordinating with the pointer of mouse , typing the correct letters and also thinking simultaneously to carry out a function. It's a *bi-layer controlling* taking place here. First layer is the control of the hand , the second is the control of the steering of the car. The layers of controlling may be extended infinitely but its strength decreases successively. The mind after prolong alignment may fail to distinguish between the layers and itself and may act as a completely new system altogether with newly added operators, enablers and enhancers.

Mechanism of Embodiment

If something (x) is not embodied it cannot be experienced. Embodiment is the first phenomenon of physical existence. Prior to that it exist in all possible shapes and states. When x is embodied it needs consciousness to experience it. And this consciousness cannot be installed from outside. It have to innately present within x to have the experience of that embodiment. The embodiment holds not all the 'thing' rather a fragment of that and is dependent on various known and unknown factors. There can be multiple embodiment in a system and each embodiment can interact with its environment. The embodiments can have different formats and each embodiment have some degree of freedom. It can function as an autonomous system that can trigger , support or inhibit some event in a definite space and time. Like an object can be embodied in a photograph or digitally in a device , thoughts in a book , voice in a recorder , desires in the offspring , time in a clock, emotions in the music , mind can also be embodiment in a system which can be further trained or dismantled.

Uploading a Thought

When the mind desire for something or other it releases certain amount of energy and information into the system which travels in the spacetime and may get embodied at some point. Emotions also works in similar fashion while getting transmitted from one individual to another. Thought of every kind, irrespective of its owner can be uploaded in the mind space. Uploading a thought is faster than downloading a new thought into the system.

Downloading a Thought

Thoughts which we use to function in the world or to perform a certain task is within a limited area of function. It is enough for our survival and creativity but it is inadequate in conveying the structure of the whole system where it functions. Downloading thought is much slower and consumes more energy from the system as it has to overcome various constrains to finally get a format intelligible by a human mind.

Mind and Morality

Morality is something that is not taught directly so it's like an irrefutable law for the mind what it holds as the guiding principle of its behavior. It always tries to maintain this law and when it fails to do that it construct a new guard to protect it and keep a watch on it in the form of guilt and regrets. What strengthen these emotions is the imaginary law which need t o be followed and in which it failed (as it is being conditioned in that way subconsciously) . It highly depends on the narrative the mind accept for a given period. Morality in itself is immeasurable in isolation. It get its value when it is associated with an act. Morality is measureable from the after effect it left by not following the dictated laws. This struggle is a byproduct of the fight between two opposing narrative.

Mind and Time

When we look at an analog clock we calculate time in a very complicated way, though it may seem very easy after a long period of experience with it. Let's look at it in a step by step processes. First we divided the eternal time to 24 hours. But it only exhibit numbers from 1 to 12 in a circular form (as if the same events will be repeated over and over again, which is not the case) . Then we fix two pointers of unequal size ; the shorter one indicating hours and longer one for minutes and a ever ticking thin pointer for measuring second. The shorter pointer when point at any number (say 9) we think its nine and when we look at the other pointer which is on 3 , we ignore the number three and replace it with the conception of 15 (9 : 15) by diving the circle into twelve parts and each part is separated with five minutes giving 60 minutes over a cycle from day to night again and again. But we do not experience time this way. We experience it differently psychologically. We only experience 'Now'. What we had was also 'Now' and what we will , will also be 'Now'. Mentally we cannot experience or divide time. What we are doing here my measuring time with a clock is a vague calculation of arbitrary time which is made to reach the point we call as 'Now'. The body exist in physical time and mind uses this time to perform some mental functions which are sometimes very slow and sometimes very fast depending on various other factors to decide its goals. Mind cannot experience or record time in fragments like femtoseconds , nanoseconds etc. Assuming for a moment that it can experience time in itself then the experience of reality would be different. If we had an experience of one hour, we record only the experiences of the images we perceived in that one hour not the time itself. We may remember what we felt , saw, heard but we do not have the memory of time itself (here , one hour) , even though it is in our own experience like that of different objects. Again when we recall we do not recall the one hour experience and spend another one hour rather we only recall the experience we had in that one hour.

Role of Narratives

The mind follows narrative from a language which it had learned by associating itself with its environment and carryout mental functions. Grammar of a language is being sensed through intuition naturally over long exposure to that. Objects (of any kind) are mere words for mind and have to be identified , categorized and organized for higher order operations. It happens very fast and most of these are unconscious. When it listen to a word , it immediately convert it into images (if possible) or to an empty concept (which is yet to be filled). Then it use these images to built a meaningful narration which can further be processed.

Mind does not have to construct exact narrative for an event, it can alter, modify, narrow down, magnify or even beautify it. Mind is free to deconstruct the reality and project it in all possible forms deviating from what is actually the case in the real world. As these false narratives are not grounded in facts (which mind is aware of) , they are not realized by the mind. At the same time mind can pretend as if they are real and put they in various mental processes. Here, there is a diversion that takes place by moving away from the native reality and generate a new reality solely for itself. Though the mind treats these two indifferently at

the same time it is aware of their respective nature. If at any point mind fails to distinguish real narrative from the unreal it either mix or derealize the reality. Reality is understood by the mind though narrative. So, you can change the reality by changing the narration. Then you will see what you will narrate to yourself.

Mind can also create something which may not exist at all because it can always built a category of that non-existing thing. What is being created is the idea of that thing , not the thing itself. The category doesn't suggest there must always be something inside. It's like an empty set. The empty concept is no different from a well established concept and can be equally used as that of a concept having real objects in the real world. In direct narration the mind articulates the concept as it is without altering the meaning. But in an indirect narration as in case of irony and metaphors meaning are being altered preserving the actual sense and intension of the statement. Metaphors are simplified picturization of an event or phenomenon which can be used by the mind more easily than the original statement. This is a mental operation where meaning is obtained by processing a bi-layer statement. When the statements fail to obtain meaning creating a loop than it becomes a paradox. Paradox stops a cognitive process by preserving the logic. A cognitive operation is much easier when it is guided by logic.

Mind has created very mysterious concepts like ' friendship' that transcends the biological relationship and sometimes may overpower the blood relations. The narrative that mind uses in the friendship is more deeply structured in our brain than the kinship we have genetically acquired. Similar is the case of love with sexual partner. Love, though born out of emotion does not get restricted in the mind and body only but can extend to the objects of the world and other species regulating the behavior of human. 'Morality' is such interpersonal narrative where each one is owed to take care of others emotion and body irrespective of their biological or social relation. Each concept is supported by another concept (here Humanity). No 'ism' or ideology is possible without narration. Formation and sustenance of state requires a common narrative among the citizens to support the government. Religion needs a common narrative too to bind people together to a particular set of believe. Any institution or foundation can have unity only if people belonging to that community have the same narrative in their mind. Only narratives can bind many minds together. There is no permanent narrative to which the mind can hold on to unless it is willing to self-hypnotize itself. Here, the mind repeats the same narrative to itself over and over again to maintain the stability and security of the information. Narration put a layer of veil on the reality and sometimes allow us to see the fact through it and sometimes also deviate or prevent us from looking at fact as it is. The mind uses certain words to capture and store the experience which may or may not have real existence. It just fulfills the operation and produces the result which is demanded on that moment of time. It's easy to understand by categorizing the narratives but it sometimes is delusional and may leads to incorrect conclusions and results. Emotion follows the narration . If you alter the narration the emotion will naturally get altered. Some narrative pause the thinking because some concepts like Absolute, Infinity, Eternity etc. cannot be processed by human mind. Mind does not know how to use these concepts. It can only describe these concepts but cannot use them in its cognitive process. Narratives can be one way or another

that is each word has its own kind and category, some words are (a) physical (b) social (c) emotional (d) metaphysical (e) spiritual and so on. The meaning of the word get categorized according to its type in the mind and it get its response accordingly. If the mind fails to put these words in their respective category then confusion arises resulting in the disintegration of information.

Mind and the Sublime

Quality

When we say he is a 'good human being' , how do mind blend 'goodness' and 'human being'. One possible process may be we acquire the sense of goodness from a good or pleasant experience from an object. And when the same experience is sense from a person the mind integrate the beautiful experience with person and hence called him/her as good human being. Quality refers to nothing but the quality of the object through its experience. The degree of quality correspond to the physical status of the object mostly. But mind still has the ability to recreate the quality of an experience without the object to some degree. This quality of experience is aroused my many substances and their features . It's the same quality the mind experience with different objects. It may also sometimes be emotional like in case of Love.

It is very interesting to see that when mind compares the quality of two objects what is it comparing. Let's take two objects (two somethings) X and Y. X given with the quality $\mathbf{q_1}$ and Y with $\mathbf{q_2}$. It can have three possible outcomes ($\mathbf{q_1 > q_2}$, $\mathbf{q_1 < q_2}$, $\mathbf{q_1 = q_2}$). In case of equal quality the mind may treat them as same.

Humor

I do not know if you have ever noticed humor comes only from real possible events which are always logical. Anything illogical cannot be funny. Humor is processed at the same speed in all human minds that's why we laugh simultaneously if we get the joke. Humor in itself is a language which need not be always communicated through words. It has its own intelligence and is not trainable from outside.

Beauty

Beauty is a higher order cognitive process. It requires many other processes to get activated . It may starts with visual processing , auditory processing , emotional processing or intuitional processing. Beauty of course is a rewarding mental state which may have evolved from the aesthetic ground of sexual selection to meet the aesthetic requirement of the sexual partner for a healthy offspring. But this aesthetic intelligence is being used in many other creative aspects of human existence like, fashion, art, architecture, music, dance, poetry and sometimes in philosophy.

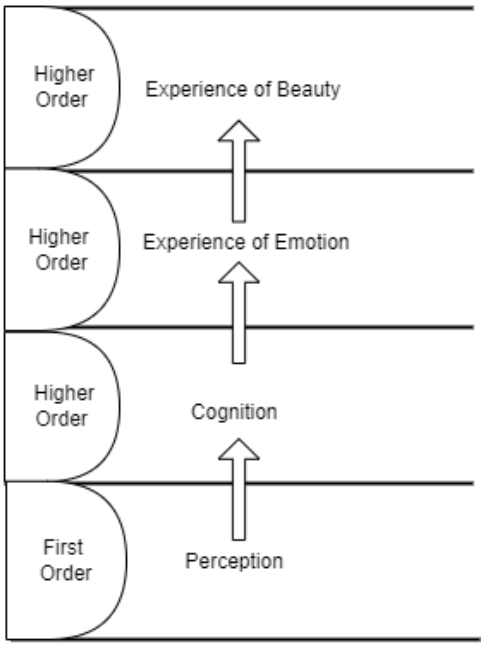


Figure 9: Cognitive order

Different modes of beauty

a) Beauty in Innocence

When we are clouded with information we are unable to see things as they are. Everything we see, feel and conclude are being conditioned by our knowledge. Innocence is not known that you do not know, innocence is not knowing that you don't know. Because knowing is an illusion with all its intellectual operations. Innocence cannot be shown only objects, persons and events that are associated with innocence can be observed.

Different modes of beauty

b) Beauty in Incompleteness

There is more beauty in incomplete form of existence for the mind. Incompleteness denotes possibility of some form of existence which is yet to be perceived. There is desire, hope and life in it waiting forever to be accomplished.

c) Beauty in Discontinuity

Beauty of an experience can only be preserved with discontinuity. Beauty demands novelty for its existence. Any continuous event fails to retain beauty hence it break itself up to experience beauty again in a new form. The freshness of an experience can only be

maintained through discontinuity or in other words by deviating away momentarily from the old series of experience to a new order.

[**Repetition** – If **x** is being repeated again and again , can we say it is the same **x** or each reappearance is a new **x**

…. xxxxxxxxxxx…….

If **x** is enjoyable then Is it possible to see **x** in a novel way?. There may be other ways of enjoying **x .** If we can forget the previous **x** we can enjoy the current **x**]

(d) Beauty in Uncertainty

One can never enjoy anything which is certain. Certainty can only be realized. It cannot be enjoyed. Every experience of beauty demands some elementary form of surprise and uncertainty. If one is certain or aware of something prior to the experience then beauty get lost there. It is impossible to experience beauty with certainty.

(e) Beauty in Absence

The mind admire beauty not in the presence of a thing or an event or a person it admire it when it is no longer with it. Anything is always available mind usually ignores it. It find beauty in things which are either lost or hard to recover. The sense of beauty is generated from the fear of missing something which will no longer be continued due to some reason. The same thing which mind gets without effort the mind take it for granted and the beauty disappears.

Enjoybility criteria

Have you ever wondered how mind enjoys anything? The consciousness is exposed to any many experiences throughout the life but all experiences are not treated equally by the mind. Mind consider some experience to be enjoyable while find other to be indifferent or vague sometimes. Here, I mean only those experiences which has the potential to arouse those emotions which the individual consider as beautiful. Different people see beauty in different things but what is the underlying ground where they all meet. Why something is meaningful to someone and its meaningless to other. If something is beautiful then it is meaningful to the individual and hence enjoyable. It is enjoyable for the mind of something is novel, discontinuous, uncertain and so on. These are few criteria of enjoybility.

Enjoyment

We do not say things like ‘I has seen this beauty before’ why is that so? Even though we have observed that picture or object multiple times. This suggest beauty defies the general response pattern of the observer. Even though the experiencer had experienced the beauty earlier , still it want to experience it again and this does not have any relation with the earlier experience of beauty. Beauty can be enjoyed multiple times (but only when experienced discontinuously). The ways in which mind receives beauty are infinite but the way mind can express beauty is limited. The goal is not the expression of beauty or absorption in it. The

expression need not have to be expressed again . The expression can only be enjoyed . And the enjoyment does not need further expression . The mind enjoy something or can integrate it into it. If mind integrated it into itself then it may not be enjoyable anymore. For example , one never says- 'I love her, so I will become her'. But if you become her , I am afraid you can love her anymore.

Preservation of Beauty

The mind cannot sense beauty of an experience for a longer time. An experience is beautiful only because it is not still. It is impossible for the mind to obtain beauty from a single experience however sublime it may be. Every good experience demands a discontinuity for its own sake to retain its beauty. For instance, when you listen to a beautiful musical composition you will good. But when you listen to that music repeatedly its beauty gradually decreases. The mind values beauty only when it is presented in a restricted condition. Sensitivity and beauty goes hand in hand with one another. Beauty of an experience is affected by the excessive use of the same content for long period of time. The only way to preserve the beauty of an experience is to break the flow of the experience by moving to a new order of mind. This will produce the sense of longing for the continuation of the present experience. Hence will restore the beauty of the current experience. Otherwise the beauty of an experience will be destroyed due to continuation of same mental state. The beauty of an experience lies in its impermanency.

Non-Understanding

The only way to experience understanding of something is through operations of the mind. The answer to the understanding of the facts lies in the absence of non-understanding. This experience of non-understanding is not the opposite of the of the understanding rather it is the limit of understanding. To understand 'understanding' we have to understand non-understanding. What is really taking place in the mind during the process of understanding. Are new information generated, old ideas are replaced or just the constrains are removed ?

Game of Problem Solving

All problems are psychological even the physical, mathematical and environmental problems are psychological or mental. There is no direct relation between the physical world and the abstract world. Objects in the physical world does not have any problem in themselves. They are bound by the laws of nature. Things either can or cannot exist in a given configuration but their existence is independent of our conception of it as a problem or solution. We should not question the state of affair itself. Problem arises only when mind think that this particular affair can be other that what it is. The simple solution to this thought is that the state of affairs can never be the way mind want it to be. An event in the physical world happens as one of the possible form of reality that has shaped itself up. The mind always loves to play this game of problem solving. This arises from the desire to restructure the reality. Mostly problems are different forms of dissatisfaction. Nature does not call anything as a problem, it's the mind

that convince itself that there is a problem and wants to play with it. Without this game there is neither problem nor solution, only things as they are forever.